

## CLAIMS

1. An arrangement for real time handling of a digital audio signal, the arrangement including a personal computer PC which includes:
  - 5 - a network connection device arranged to exchange sound packets which are asynchronously transferred over a network; and
  - a telephony application connected to the network connection device,
- 10 wherein a sound device has a connection to the telephony application, characterized in that the sound device includes:
  - a frame buffer which is connected to said sound device connection;
  - a codec device which is connected to the buffer; and
- 15 - a D/A-A/D converter connected to the codec device,  
  
wherein the sound packets are transferred asynchronously through the PC between the network connection device and the frame buffer in the sound device.
2. An arrangement according to claim 1, characterized in that
  - 20 the codec device and the frame buffer exchanges sound frames and the codec device includes an auxiliary codec for generating sound frames to be inserted in a stream of sound frames.
3. An arrangement according to claim 2, characterized in that
  - 25 the auxiliary codec is arranged to predict sound frames and replace frames from lost sound packets with the predicted frames.
4. An arrangement according to claim 1,2 or 3 characterized in that the codec device is a hardware device.

5. An arrangement according to claim 1, 2, 3 or 4, characterized in that the A/D-D/A converter is a full duplex converter.
6. An arrangement according to any of the claims 1-5, characterized in that the sound device connection includes a control connection and the buffer is arranged to receive a control signal on the control connection from the telephony application, which control signal determines the width of the buffer.
7. An arrangement according to any of the claims 1-6, characterized in that the sound device connection includes a control connection and the codec device has at least two codecs, wherein an appropriate one of the codecs can be selected by a control signal on the control connection from the telephony application.
8. A method for handling of a digital audio signal in connection with a personal computer PC, the PC including a telephony application which is connected both to a network and to a sound device, the method including:
  - exchanging sound packets which are asynchronously transferred over the network;
  - transferring the sound packets asynchronously through the PC between the telephony application and the sound device;
  - buffering the sound packets in a frame buffer in the sound device;
  - decoding sound frames in the sound packets in a codec device; and
  - D/A converting the decoded sound frames.
9. A method according to claim 8, wherein the codec device includes an auxiliary codec and the method includes:

- following in the auxiliary codec a stream of sound frames;
- generating sound frames in the auxiliary codec in dependence on the stream of sound frames; and
- inserting the generated sound frames into the stream of sound frames.

5

10. A method according to claim 9 including:

- predicting sound frames in dependence on the stream of sound frames; and
- inserting predicted sound frames for frames in lost sound packets.

10

11. A method according to claim 9 including:

- indicating whether the frame buffer is temporarily empty; and
- inserting generated noise sound frames when the buffer is empty.

15

12. A method according to claim 8 including:

- indicating whether the frame buffer is overfilled; and
- speeding up the codec device when the buffer is overfilled.

20

13. A method according to claim 8, wherein the telephony application has a control connection to the sound device, the method including:

25

- determining in the telephony application the width of the frame buffer; and
  - controlling the frame buffer width by a control signal on the control connection from the telephony application.
- 5 14. A method according to claim 8, wherein the telephony application has a control connection to the sound device and the codec device has at least two codecs, the method including selecting an appropriate one of the codecs by a control signal from the telephony application on the
- 10 control connection.
15. A method for handling of a digital audio signal in connection with a personal computer PC, the PC including a telephony application which is connected both to a network and to a sound device, the method including:
- 15 - A/D converting an analog sound signal into a digital sound signal in the sound device;
- coding the digital sound signal and forming sound frames;
- forming sound packets which are transferred asynchronously through the PC between the telephony application and the
- 20 sound device.
16. A method according to any of the claims 8 to 15, wherein the sound device operates in full duplex.